ABSTRACT OF THE DISCLOSURE

A flat panel antenna, monopole or dipole, formed from a conductive loaded resin-based material containing micron conductive powders or micron conductive fibers to provide conductivity. The monopole antenna has an antenna element having an outer periphery with a length equal to an integral multiple of a quarter wavelength of the desired center frequency of the antenna. A bobbin, also formed of the conductive loaded resin-based material, and is attached to the antenna element by connection elements. A coil of conductive wire, having two ends connected to a coaxial cable, is wound around the bobbin. The coaxial cable can deliver power to a radiating antenna or extract power from a receiving antenna. The dipole antenna has first and second antenna elements both formed of conductive loaded resin-based material. The peripheries of the first and second antenna elements have lengths equal to an integral multiple of a quarter wavelength of a first and second frequency. The center frequency of the antenna is between the first and second frequencies. First and second bobbins, wound with first and second coils of conductive wire are attached to the first and second antenna elements. The first and second coils of wire are connected to a single coaxial cable which delivers power to a radiating antenna or extracts power from a receiving antenna.